

WO 00/52478

-1-
SEQUENCE LISTING

SEQ I.D. No. 1 - *Drosophila* Asp amino acid sequence (Genbank Accession No. U95171).

1	MELVWSPVLE	VACKETLQLI	DNRNFRKEVM	IILKSKSNQP	VKNPRKFPTV
	GKTLQLKSPT				
61	GAGKTMKSVV	SAAVQQKKRM	SAAAAPPSKQ	TWRVTAPSRP	AAWAHPPPQA
	PLVEKNVYKT				
121	PQEEPVIISP	QPRSLKENLS	PMTPGNLLDV	IDNLRFTPLT	ETRGKGQATI
	FPDNLAAWPT				
181	PTLKGNVKSC	ANDMRPRRIT	PDDLEDQPAT	NKTFDVKHSE	TINISLDTLD
	CSRIDGQPH				
241	PLNKTTTIVH	ATHTRALACI	HEEEGPSPPR	TPTKSAIHDL	KRDIKLVGSP
	LRKYSESMKD				
301	LSLLSPQTKY	AIQGSMPNLN	EMKIRSIEQN	RYYQEQQIQI	KAKDLNSSSS
	SEASLAGQOE				
361	FLFNHSEILA	QSSRFNLHEV	GRKSVKGSVP	KNPHKRRSHE	LSFSDAPSNE
	SLYRNETVAI				
421	SPPKKQRVED	TTLPRSAAPA	NASARSSSAH	AWPHAQSKKF	KLAQTMSLMK
	KPATPRKVRD				
481	TSIQPSVKLY	DSELYMQTCI	NPDPFAATTT	IDPFLASTMY	LDEQAVDRHQ
	ADFCKWLNAL				
541	VSIPADLDAD	LNNKIDVGKL	FNEVRNKELV	VAPTKEEQSM	NYLTKYRLET
	LRKAAVELFF				
601	SEQMRLPCSK	VAVYVNKQAL	RIRSDRNHLH	DVVMQRTILE	LLLCFNPLWL
	RLGLEVVFE				
661	KIQMQSNRDI	VGLSTFILNR	LFRNKCEEQR	YSKAYTLTEE	YAETIKKHSL
	QKILFLLPFL				
721	DQAKQKRIVK	HNPCLEVKKS	PHKETKDILL	RFSSELLANI	GDITRELRL
	GYVLQHRQTF				
781	LDEFDYAFNN	LAVDLRDGVR	LTRVVEVILL	RDDLTRQLRV	PAISRLQRI
	NVKLALGALG				
841	EANFQLGGDI	AAQDIVDGHR	EKTLSELLWQL	IYKFRSPKFH	AAATVLQKWW
	RRHWLHVVIQ				
901	RRIRHKELMR	RHRAATVIOA	VFRGHQMRKY	VKLFKTERTQ	AAIILQKFTR
	RYLAQKQLYQ				
961	SYHSIITIQR	WWRAQQLGRQ	HRQRFVELRE	AAIFLQRIWR	RRLFAKKLLA
	AAETARLQRS				
1021	QKQQAASYI	QMQRWYQLG	RIQRHEFLRQ	RDLIMFVQRR	MRSKWSMLEQ
	RKEFQQLKRA				
1081	AINIQQRWRA	KLSMRKCNAD	YLALRSSVLK	VQAYRKATIQ	MRIDRNHYYS
	LRKNVICLOQ				
1141	RLRAIMKMRE	QRENYLRLRN	ASILVQKRYR	MRQOMIQDRN	AYLRTRKCII
	NVQRRWRATL				
1201	QMRERKKNYL	HLQTTTKRIQ	IKFRAKREMK	KQRAEFLQLK	KVTLVVQKRR
	RALLQMRKER				
1261	QEYLHLREVT	IKLQRRFHAQ	KSMRFMRKY	RGTQAAVSCL	QMHWRNHLLR
	KRERNSFLQL				
1321	RQAAITLQRR	YRARLNMIIQ	LKSYAQLKQA	AITIQTRYRA	KKAMQKQVVL
	YQKQREAIK				

-2-

1381 VQRRYRGNLE MRKQIEVYQK QRQAVIRLQK WWSRIRDML CKAGYRRIRL
 SSLSIQRKWR
 1441 ATVQARRQRE IFLSTIRKVR LMQAFIRATL LMRQQRREFE MKRRAAVVIQ
 RRFARACML
 1501 KARQDYQLIQ SSVILVQRKF RANRSMKQAR QEFVQLRTIA VHLQOKFRGK
 RLMIEQRNCF
 1561 QLLRCSMPGF QARARGFMAR KRFQALMTPE MMDLIRQKRA AKVIQRYWRG
 YLIRRRQKHQ
 1621 GLLDIRKRIA QLRQEAKAVN SVRCKVQEAV RFLRGRFIAS DALAVLSQLD
 RLSRTVPHLL
 1681 MWCSEFMSTF CYGIMAQAIR SEVDKQLIER CSRIILNLAR YNSTTVNTFQ
 EGGLVTIAQM
 1741 LLRWCDKDSE IFNTLCTLIW VFAHCPKKRK IIHDYMTNPE AIYMVRETKK
 LVARKEKMKQ
 1801 NARKPPPMTS GRYKSQKINF TPCSLPSLEP DFGIIRYSPY TFISSVYAFD
 TILCKLQIDM
 1861 F

SEQ I.D. No. 2 - *Drosophila* Asp nucleotide sequence (Genbank Accession No. U95171).

1 atggagctag tgtggagccc cgtccttgag gtggcctgca aggagacgct
 gcagctaata
 61 gacaaccgca acttccgaaa ggaggtgatg atcataactca agtccaagag
 caaccagccg
 121 gtcaagaacc cgcgcaaatt tcctactgtc ggcaagaccc tgcagctgaa
 atcgccgaca
 181 ggagctggca agacaatgaa aagcgtggta tccgctgctg tgcagcaaaa
 gaagcgcgatg
 241 tctgcagcag cagcgcctcc ctccaagcag acatggcgag tgactgctcc
 ttcgcgtccc
 301 gctgcatggg cacatccacc tccacaggct cctcttgctg agaagaatgt
 atacaagact
 361 ccacaagaag agcccgtata catatcacca cagcctcgca gtcttaagga
 aaatctaagc
 421 cctatgacgc caggaaacct actcgacgtg attgacaatc tgcgattcac
 acctctcacc
 481 gaaacccgtg gcaaaggaca agctaccatt ttcccggaca atctggcagc
 ctggcccaca
 541 ccaacactta aagggaatgt aaaatcatgt gctaatagata tgcggccgcg
 tcgaatcact
 601 ccagatgatc tagaagatca gcctgccaca aacaaaacgt tcgatgtaaa
 gcattccgag
 661 actatcaata tttcgttgga caccttggac tgctccagga tcgatggaca
 accgcatacg
 721 cccctaaata agacaacaac cattgtgcat gccacgcaca ccagagctct
 ggctgtatt
 781 catgaggagg agggaccaag tccacctagg acgcccacga agagcgccat
 acacgacctg
 841 aagagggaca ttaagttggt gggttcaccc ttacgaaagt attccgagtc
 catgaaagat

-3-

901 ttgtcacttc tatcgccaca aactaagtat gccattcaag ggtctatgcc
 taatctaaat
 961 gaaatgaaaa tccgctcgat cgaacagaat agatattacc aggagcagca
 gatccagata
 1021 aaggccaaag acttgaatag ctctcttagt agcgaggcta gtttggccgg
 ccagcaggag
 1081 tttctattca accacagtga gatcctcgct cagtccagtc gttttaatct
 ccatgaagta
 1141 ggtcgggaagt cgggtgaaggg aagtcgggtg aagaatcctc acaagcgccg
 ctctcatgag
 1201 ttgagttttt cggatgcacc tagcaacgaa tcattgtacc gcaatgaaac
 tgtagccatt
 1261 tcccctccta aaaagcaacg ggttgaggac actactctgc ccagaagtgc
 agcgccggca
 1321 aatgcatctg caagaagcag tagtgccac gcctggccac acgccaatc
 caagaagttt
 1381 aagctagcac aaaccatgtc actgatgaag aagcccgcga caccacgaaa
 agtcaggagc
 1441 actagcattc agccttccgt caagctctat gactcggagc tgtatatgca
 gacgtgcatc
 1501 aaccgggac catttgcagc aactacgaca attgatccat ttctggcatc
 taccatgtat
 1561 ttggatgaac aggctgtgga tcgtcatcaa gctgacttta aaaagtgggt
 aaatgccctt
 1621 gtctccatac ccgctgacct ggacgcagat ttaaataaca aaatagacgt
 tggtaaagctg
 1681 tttaacgagg tgcgcaacaa agagctcgtg gtggctccca ccaaggagga
 gcagtctatg
 1741 aactacctaa cgaaataaccg cctggagacg cttcgtaagg cggctgtgga
 gctcttcttc
 1801 agtgagcaga tgcgcctgcc atgctccaaa gtggccgtat atgtcaacaa
 gcaagctctg
 1861 cgcattccgta gcgatcgtaa tcttcaccta gacgtagtta tgcaacgcac
 catacttgag
 1921 ctgctgcttt gcttcaatcc cctttggctg cgccttgga cggagtgggt
 ctttggcgag
 1981 aagatccaga tgcagtctaa tcgagacatt gtaggcctca gcacctttat
 cctcaatcgc
 2041 ttgttccgga ataagtgtga ggagcagagg tacagcaagg catacacact
 caccgaagag
 2101 tacgcggaga ccattaagaa gcactcattg cagaaaatcc tctttttgct
 gcctttcctc
 2161 gatcaagcta agcagaagcg catcgtcaag cacaatccct gtttgtttgt
 taaaaagtcg
 2221 ccacataaag agaccaagga tattctgctg cgcttctcgt cggagctgct
 cgccaacatt
 2281 ggtgatatta cgcgggaact tcgtcgccctg ggctacgttc tacagcacgc
 ccaaacattt
 2341 ttggacgagt tcgattatgc cttcaacaac ttggctgtgg acctaagaga
 tggcgtgaga
 2401 ctaacccgag tcgtggaggt aattttacta cgcgatgatc taacccgcga
 gttaagggtg

-4-

2461 ccagccatct	ctcgccttca	gcggatcttc	aatgtaaagc	tagctctggg
cgcaacttgg				
2521 gaagccaact	tccagctagg	cggcgacatc	gccgcccagg	acatcgttga
cggaacatcgt				
2581 gagaagacgc	tttccctgct	ctggcaactt	atttaciaaat	tccgctcggc
caagtttcat				
2641 gcggcggcca	cggtgctcca	gaaatgggtg	cgccgtcact	ggctgcacgt
tggtatccag				
2701 cgtcgcattc	gccacaaaga	gcttatgcgt	cgccaccggg	ccgctactgt
cattcaggcc				
2761 gtgttccgtg	gccaccagat	gagaaagtac	gtgaagttgt	ttaagacgga
acgcactcag				
2821 gccgcaataa	ttctgcaaaa	gttcacccgt	cggtatttgg	cccagaagca
gctatatcag				
2881 agctatcaca	gtattatcac	catccagcgc	tggtggcgag	cccaacaact
gggaaggcag				
2941 caccgccagc	ggtttgtgga	gctccgagag	gctgcgatct	ttcttcagcg
gatctggcgg				
3001 cgacgactct	ttgccaaaaa	actattggcg	gcggcggaaa	cagccagact
tcagcgatcg				
3061 caaaaacaac	aggcagctgc	tagttatatt	caaagtcaat	ggcgaacgta
tcagctgggc				
3121 agaattcagc	gacacgagtt	cctgcgccag	agggacctca	tcatgtttgt
tcagcgcagg				
3181 atgcgaagca	agtggagtat	gctggagcag	cgcaaggagt	tccagcaact
aaagcgtgca				
3241 gctataaata	tccaacaacg	ctggcgagcg	aagctttcaa	tgagaaagtg
caacgctgat				
3301 tatttggcac	ttcgttccag	cgttcttaaa	gttcaggctt	acaggaaagc
cacaatccag				
3361 atgagaatag	atcgtaatca	ctactattcc	ctgcgaaaaa	atgttatctg
cctgcaacag				
3421 cgactgaggg	ccatcatgaa	aatgcgcgaa	cagagggaaa	attatctgag
gctgcgaaat				
3481 gcttcaatac	tagttcaaaa	acgctaccgc	atgcgtcaac	aaatgatcca
ggatagaaat				
3541 gcatatttaa	gaacccgcaa	atgtatcatc	aatgtccaga	ggcgtctggag
agccactctg				
3601 cagatgcgtc	gagaaaggaa	gaactacctt	catctccaaa	cgacaaccaa
acgaattcaa				
3661 atcaagttcc	gtgccaagcg	cgaaatgaaa	aagcaaagag	ccgagtttct
tcagctgaaa				
3721 aaggttacc	ttgtagtcca	gaaacgtcgg	cgggctttgc	tgcagatgcg
aaaggagcgc				
3781 caggagtacc	tacatctgcg	cgagggttacc	ataaagctgc	agcgcagatt
ccatgctcaa				
3841 aaatcaatgc	ggttcatgcg	agccaagtac	cgcggcaccc	aggctgctgt
gagctgcctg				
3901 cagatgcatt	ggcgtaatca	tctccttagg	aaacgggaga	ggaacagttt
cttacaactg				
3961 cgtcaagcag	caataacact	gcagcgacgg	taccgagctc	gtctgaatat
gatcaagcag				

-5-

4021 ttgaagagtt acgcccagct gaaacaggca gctattacca ttcaaaccgg
 atatagagcc
 4081 aagaaggcaa tgcaaaagca ggtggtcttg taccaaaagc aaagggaagc
 cattatcaaa
 4141 gtgcaacgac gataccgcgg caatctggag atgaggaagc agattgaagt
 ctaccaaaaa
 4201 cagcgccagg cagtcacccg cttgcagaaa tgggtggcgca gtatacgcgca
 catgcggtg
 4261 tgcaaaagcg gctaccgaag gattcgactc agttcattga gcattcaacg
 caagtggcgg
 4321 gccacagtgc aggctcgctc ccaacgggag atcttcttaa gcaccatccg
 caaagtgcga
 4381 cttatgcagg catttatcag agcaacttta ctgatgcgtc agcagcgcgag
 ggaattcgag
 4441 atgaagcgaa gggctgccgt agtgatccag cgccgggttc gtgctcgctg
 tgctatgcta
 4501 aaggcgagac aggattacca attaatccaa tcctctgtga tcctggtgca
 gcgcaaattc
 4561 cgtgctaata gcagcatgaa gcaggcacgc caggaatttg tccagctgcg
 tactattgca
 4621 gtccatttgc aaaaaagtt ccgtggcaag cgtctaata ttgagcagcg
 taattgttcc
 4681 caactgctcc gctgttccat gccgggcttc caggcacgtg cccgcggctt
 tatggctcgc
 4741 aaacgattcc aggccctgat gacacccgag atgatggacc tcatccgcca
 gaagcgcgcc
 4801 gccaaaggta tacagcggtta ctggcggggc tatctaata gacgacgtca
 gaagcaccag
 4861 ggtctcttgg atatccggaa gcgtattgct cagctgcggc aagaggcaaa
 ggcggtaaac
 4921 tctgtgcgct gcaaagtcca ggaggcggtg cgtttccttc gcggacgctt
 tatcgcatca
 4981 gatgcgtag cagtgcctaag tcaattggat cgtctttcgc gcaactgtgcc
 acacctgctc
 5041 atgtggtggt cggagttcat gtccacgttt tgctatggca tcatggctca
 ggccattcga
 5101 tcagaggtgg ataagcagct tatagagcgc tgcagccgga tcatcctaaa
 tttggccgc
 5161 tacaatagca ccacggtgaa cacgttccag gagggcggtt tggtcaccat
 tgcccagatg
 5221 ttattgcgct ggtgcgacaa agacagtgag atattcaaca ctttgtgcac
 cctcatttgg
 5281 gtattcgccc actgtcctaa aaagcgaaag atcattcacg actatatgac
 caacccagag
 5341 gccatttaca tgggtgcgca aactaagaag ctctggggcc gcaaggaaaa
 gatgaagcaa
 5401 aatgcacgca agccgccgcc aatgacaagt ggacggtata agagccaaaa
 gataaacttc
 5461 acgccgtggt ccctgcccag cctggagccg gacttcggaa tcatccgcta
 cagtccctac
 5521 acgtttatct cgtccgttta cgccttcgat acgattttgt gcaagctgca
 gatcgacatg
 5581 ttttag